



## SHORT-CYCLE ARC WELDING SYSTEM AND METHOD

COPY

### CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of PCT application PCT/EP02/09760, filed on September 2, 2002, which claims priority to German application no. DE 101 44 256.4, filed on September 3, 2001, both of which are incorporated by reference herein.

### BACKGROUND AND SUMMARY OF THE INVENTION

[0002] The present invention relates to a short-cycle arc welding system for welding elements, such as metal studs, to components, such as metal sheets, having:

- a robot that has at least one arm that can move in at least one coordinate axis
- a welding head that is mounted on the arm and on which is provided a holder for holding an element and a linear motion device for advancing and retracting the holder relative to the welding head, and
- a measurement system for determining the relative position of a component to an element to be welded to the component and held by the holder, wherein the measurement system has a foot mounted on the welding head that is designed to contact the component during operation in order to determine the relative position of the element to the component.